

## **ABSTRACT OF THE DISCLOSURE**

The 28-kDa outer membrane proteins (P28) of *Ehrlichia chaffeensis* are encoded by a multigene family consisting of 21  
5 members located in a 23-kb DNA fragment in the genome of *E. chaffeensis*. Fifteen of these proteins are claimed herein as novel sequences. The amino acid sequence identity of the various P28 proteins was 20-83%. Six of 10 tested *p28* genes were actively transcribed in cell culture grown *E. chaffeensis*. RT-PCR also  
10 indicated that each of the *p28* genes was monocistronic. These results suggest that the *p28* genes are active genes and encode polymorphic forms of the P28 proteins. The P28s were also divergent among different isolates of *E. chaffeensis*. The large repertoire of the *p28* genes in a single ehrlichial organism and  
15 antigenic diversity of the P28 among the isolates of *E. chaffeensis* suggest that the P28s may be involved in immune avoidance.